30 at a point 34. The haptics 14, 16 postion the lens 10 within the capsule bag and against the posterior capsular membrane 30.

The posteriorly projecting edge region 18 and the design of the convex posterior surface 32 provide an annular space outside the optic region "d" of the lens 10. The annular space is provided between point 34 and point 36 where the posterior surface 32 of the lens is lifted from the concave surface of the posterior capsular membrane 30. The annular space 38 between points 34 and 36 creates a region in which a laser may be used in discission of the posterior capsular membrane 30 in secondary cataract operations. However, the direct apposition of the optic or lens body 12 within the central optical region of the posterior capsular membrane 30 provides improved vision for the patient earlier and retards the opacification which may eventually require secondary cataract surgery following extracapsular cataract extraction. The direct apposition of the convex surface 32 with the posterior capsular membrane 30 capsule stretches the bag and posterior capsule 30 and reduces any wrinkling of the posterior capsular membrane 30. The support of lens 10 between points 34 and at 36 also facilitates opening of the capsule with a laser by the slight tension that is created between these points.

In FIGS. 2B and 2C, the optical power of the intraocular lens of FIG. 2A has been modified by altering the anterior or front surface 24. In FIG. 2B, the lens body 12 has a planar anterior surface 24'. In FIG. 2C, the anterior or front surface 24" has a convex design to further modify the power of the lens body 12. By way of example, the planar anterior surface 24' version with lens body 12 in FIG. 2B may have a total power of +25 diopters and the convex anterior surface 24" version may be for a lens 10 with a total power of +35 diopters. In the lens bodies 12 illustrated in FIGS. 2B and 2C, the convex posterior surface 32 remains unchanged with respect to the posterior capsule 30 of the eye. Power modifications of the lens body 12 may be achieved solely by changing the front or anterior surface 24.

FIG. 3 illustrates a human eye 40 surrounded in front by an upper lid 42 and a lower lid 44. The eye 40 includes a segmented view of the cornea 46 and the iris 48, the circular pigmented membrane behind the cornea 46. FIG. 3 depicts eye 40 as it would appear after it has undergone extracapsular cataract extraction. The lens capsule 50 has a central opening in its anterior or forward wall and the lens, normally a bi-convex transparent body, has been removed and replaced by intraocular lens 10 of the present invention. The intraocular lens 10 is positioned on the posterior capsular membrane 30 of the lens capsule 50 adjacent to the vitreous humor 52, the clear colorless transparent jelly filling the portion of the eye posterior to the lens capsule 50.

The implanted intraocular lens 10 has its convex posterior or rear surface 32 in direction apposition with the posterior capsular membrane 30 of the lens capsule 50. The implanted lens 10 with its concave anterior surface 24 has less opportunity for contact within the pupillary space of the iris, significantly reducing the incidence of secondary complications following lens implantation. The annular space 38, which in one embodiment has a width of 3.5 millimeters between points 34 and 36, is sufficiently outside the optic region "d" of the eye's pupil to avoid causing any optical distortion. The direct apposition of the convex posterior surface 32 of the lens implant 10 reduces the cloudiness or opacity that occurs with the posterior capular membrane following extracapsular cataract extraction. However, in those situations which do call for secondary cataract surgery by discission of the posterior capsular membrane 30 of the capsule 50, a YAG laser can be directed to the annular space 38 for discission outside the optic region of the lens and eye. As described above, the geometry of the lens 10 stretches the posterior capsular membrane 30 and places it under a slight tension at the annular space 38 to facilitate the laser surgery or knife discission.

While the intraocular lens of the present invention has been described in detail herein, it will be evident that various and further modifications are possible without departing from the scope and spirit of the present invention.

I claim:

1. An intraocular lens for implantation in the capsular bag of an eye following extracapsular cataract extraction, comprising:

a lens body having an anterior surface extending to an edge that projects posteriorly at a predetermined angle and terminates in a plane, said lens body having a convex posterior surface projecting posteriorly beyond said plane of said edge; and

haptics attached to said lens body for positioning said lens body within the capsular bag of the eye, wherein said convex posterior surface is adapted to be positioned in direct contact with an area of the posterior capsular membrane of the eye, thereby stretching and deforming the posterior capsular membrane into conformity with said convex posterior surface to improve visual acuity and to create a space between said edge, said area of contact, and the posterior capsular membrane to facilitate any laser surgery of the posterior capsular membrane required following implantation of the lens.

2. The intraocular lens of claim 1, wherein said anterior surface of said lens body is concave.

3. The intraocular lens of claim 1, wherein said anterior surface of said lens body is planar.

4. The intraocular lens of claim 1, wherein said anterior surface of said lens body is convex.

5. The intraocular lens of claim 1, wherein said posterior surface of said lens body has a radius of curvature such that said area of contact with the posterior capsular membrane accommodates the optic region of the eye.

6. The intraocular lens of claim 5, wherein said posterior surface of said lens body has a radius of curvature such that said area of contact with the posterior capsular membrane of the eye has a diameter between 2.5 and 4.5 millimeters.

7. The intraocular lens of claim 5, wherein said edge of said lens body is outside the optic region of the eye.

8. The intraocular lens of claim 1, wherein said haptics are a pair of flexible filament members attached to said lens body.

9. The intraocular lens of claim 8, wherein said haptics are adapted to be positioned inside the capsular bag to put the capsular bag in circumferential tension and to bias said lens body posteriorly into contact with the posterior capsular membrane.

10. The intraocular lens of claim 1, wherein said lens body is made from polymethylmethacrylate.

11. The intraocular lens of claim 1, wherein said lens body is a resilient material suitable for plastic deformation and injection through a small incision into the posterior chamber of the eye.